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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,867	01/10/2002	John P. Watson	D-5186	3309
30409	7590	01/06/2004	EXAMINER	
INTERNATIONAL ENGINE INTELLECTUAL PROPERTY COMPANY 4201 WINFIELD ROAD P.O. BOX 1488 WARRENVILLE, IL 60555			CORRIGAN, JAIME W	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 01/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,867

Applicant(s)

WATSON ET AL.

Examiner

Jaime W Corrigan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-13,15-22,24-32,34-41 and 43-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-13,15-22,24-32,34-41 and 43-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 4,14,23,33 and 42 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

This Office Action is in response to the Amendment filed on 06 October 2003. Claims 1, 10, 19, 38 have been amended. Claims 4, 14, 23, 33, 42 are withdrawn. Overall, claims 1-3, 5-13, 15-22, 24-32, 34-41, 43-46 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-13, 15-22, 24-32, 34-41, 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hu (PN 5,379,737) in view of Paul et al. (PN 4,892,067).

Hu discloses an electrohydraulic actuator (See Abstract, Figure 4 (10')) having a piston (See Figure 4 (70)) being translatable responsive to an actuating fluid bearing on a piston surface (See Columns 3-6), the piston surface being in fluid communication with an actuator valve (See Figure 4 (30)), the actuator valve being in selective fluid communication with a source (See Figure 4 (32), Column 3 Lines 51-60) of actuating fluid under pressure, the actuator valve (See Column 3 Lines 51-60) being shiftable to selectively port and vent actuating fluid to and from the piston surface; and a rocker arm (See Figure 4 (130)) being rotatable about a hinge point (See Figure 4 (Not numbered but clearly visible)), a first arm portion extending from the hinge point to a proximal end (See Figure 4 (From the rocker shaft toward (140))) and a second arm portion extending

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from the hinge point to a distal end (See Figure 4 (From the rocker shaft toward (130)), the proximal end being operably coupled to the piston and the distal end being operably coupled to the the master piston (See Figure 4 (60)), the first arm portion being shorter than the second arm portion (See Figure 4), the piston generating a linear translation that is imparted to the rocker and proximal end for imparting substantially all of an opening activation to the valve (See Column 3 Lines 61-67, Column 4 Lines 1-12, Columns 5-6); the actuator valve (See Figure 4 (30)) being actuated by at least one solenoid (See Column 3 Lines 46-48); the actuator valve being actuated by a first solenoid (See Figure 4 (30)) and an opposed spring (See Figure 4 (30)); the source of actuating fluid under pressure being a high pressure rail (See Figure 4, Column 3 Lines 51-60); the actuating fluid being engine lubricating oil (See Column 3 Lines 33-60); a hydraulic adjust mechanism (See Figure 4 (60)) being disposed intermediate the electrohydraulic actuator piston (See Figure 4 (70)) and the rocker arm (130)); discloses the actuator valve being in selective fluid communication with a reservoir at substantially ambient pressure (See Column 3 Lines 58-60).

Hu fails to disclose the distal end being operably coupled to the valve and the electrohydraulic actuator being displaced laterally from a valve longitudinal axis.

Paul teaches that it is conventional in the art to utilize the distal end (See Figure 2 (102)) being operably coupled to the valve (See Figure 2 (106)) and the

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electrohydraulic actuator (See Figure 2 (132), (142)) being displaced laterally from a valve longitudinal axis.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the distal end being operably coupled to the valve taught by Paul in the Hu device since it would improve valve train space savings.

Response to Arguments

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kreuter (PN 5,117,213) discloses a similar valve actuator.


Any inquiry concerning this communication from the examiner should be directed to Examiner Jaime Corrigan whose telephone number is (703) 308-2639. The examiner can normally be reached on Monday - Friday from 8:30 a.m. – 6:00 p.m. 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.


JC

Jaime Corrigan


Patent Examiner

December 29, 2003

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THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700